Shyam Sivasubramanian

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Education

Purdue University — West Lafayette, IN
Bachelor of Science in Computer Science — *Aug. 2023 – May 2027*

Purdue University — West Lafayette, IN
Bachelor of Science in Data Science — *Aug. 2023 – May 2027*

Experience

Researcher — Aug. 2024 – Present
Purdue CoMMA Lab
- Created and deployed scripts on robot manipulators to detect and avoid collisions in real time using computer vision.
- Worked with Virtual Reality (VR) technology to control robot manipulators with integrated collision detection.
- Improving **Foam**: an automated mesh simplification tool for faster computation on robot manipulators.

Data Science Intern — May 2025 – Aug. 2025
Karyon.bio
- Built classification models using Pandas and Statsmodels to detect fatty liver disease, diabetes, cervical and breast cancer from medical scans.
- Visualized performance and patient likelihood outcomes with Plotnine.

Web Developer — Feb. 2025 – Jun. 2025
The Purdue Rivet
- Developed a website using HTML, CSS, and JavaScript for Purdue's student-run publication.

Staff Photographer, Graphics Artist — Aug. 2023 – Present
The Purdue Exponent
- Photographed and designed artwork to add context to Purdue's student newspaper stories.

Research Assistant — Jun. 2022 – Aug. 2022
The Robotics Institute, Carnegie Mellon University
- Developed test scripts for reinforcement learning research in robotics.
- Conducted robot simulations to validate and improve algorithm performance.

Intern — Jun. 2022 – Aug. 2022
Biohaven Pharmaceuticals
- Analyzed clinical trial data for neurological drugs using R, ensuring accurate reporting.
- Assisted with technical issues in data collection and data corruption.

Projects

Minesweeper Auto Solver | *HTML, CSS, JavaScript* — Jul. 2025
- Generated Minesweeper puzzles and implemented an algorithmic solver with hierarchical reasoning.
- Built a web-based interface using HTML, CSS, and JavaScript.

DeepRow | *Python, Scikit-Learn, Numpy, OpenCV, MediaPipe* — May 2023
- Quantified rowing form using computer vision and pose estimation data from professional athletes.
- Trained and classified form with a Random Forest Classifier.

Shader Study | *GLSL, OpenGL* — Jun. 2024
- Created generative art pieces based on multivariable calculus and animation.
- Learned advanced concepts in graphics programming and shader design.

Technical Skills

Programming Languages: Java, R, Python, C, C++, Assembly, SQL, GLSL, HTML, CSS, JavaScript
Tools & Libraries: Mediapipe, Scikit-Learn, OpenCV, Pandas, Numpy, Virtual Reality, Plotnine, Statsmodels, Stable Baselines 3, PyTorch, Git, CLI, Linux, ROS, OpenGL